

# Receiving Report

Date: 16-11-9.  
 Supplier: Avicel

Batch No: 136076.  
 Dart P/O: 34232

Packing Slip: Yes ☒ No ☐  
 Invoice: Yes ☒ No ☐  
 Receipt: Cash ☐ Cr ☒  
 New Supplier Yes ☐ No ☒

Release Note Attached: Yes ☒ No ☐ N/A ☐  
 Waybill Attached: Yes ☒ No ☐  
 Shipment Complete: Yes ☒ No ☐ N/A ☐  
 QC18 Inspection ☐ N/A ☒  
 Work Order ☐ N/A ☒

## Discrepancies

Part Number	Description	Quantity Ordered	Quantity Rec'd	Quantity Short	Quantity Inspected	Quantity Rejected	Comment / NCR Number

Initials of Receiver

QC12

SP

Production/Admin:

Date \_\_\_\_\_

Received/Costing \_\_\_\_\_

Initial \_\_\_\_\_

Location \_\_\_\_\_



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO34232

Purchase Order Date 11/8/2016

PO Print Date 11/8/2016

Page Number 1 of 1

**Order From :**

AVIALL  
PO BOX 842275

DALLAS, TX 75284-2275  
USA

VU-AVI003

**Ship To :** DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**E-MAILED**

NOV 08 2016

**Contact Name**

**Vendor Phone** 905-676-1695

**Ship To Contact**

**Ship To Phone**

**Ship Via:** FedEx Overnight collect

**Ship Acct:**

**Buyer**

Chantal Lavoie

**Customer POID**

**Customer Tax #**

10127-2607

**Terms**

Net 30

**Currency**

USD

**FOB**

EXW - (Ex Works)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	71400-11	ps890-b2 pro seal pinnt size	11/14/2016 Yes 11/14/2016		12.00 Each	\$64.05	\$768.60
Procurement Quality Clauses A005 RIGHT OF ENTRY A013 SELF LIFE CONTROLLED MATERIAL 70% of self life remaining A015 PERSONNEL QUALIFICATION A026 CERTIFICATION OF MATERIAL CONFORMANCE A040 NOTIFICATION OF QUALITY ESCAPE A041 QUALITY MANAGEMENT SYSTEM A043 RETENTION OF QUALITY DOCUMENT							

NOV 09 2016

DAS  
26  
9-189

**Deliver To:** ANDY

**Line Total:** \$768.60

**PO Total:** \$768.60

**PO Instructions:** Fedex Acc#151793240

**Note:** Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit [www.dartaerospace.com](http://www.dartaerospace.com) for further explanation.

**Change Nbr:** 1

**Change Date:** 11/8/2016



# PACKING LIST



DELIVERY NUMBER: 8003783528

ROUTE: US FedEx International Priority

PAGE:1 of 1  
DATE:08NOV16  
TIME:20:18:07  
EMP:00000000  
ORD TYP: ZOR 132  
CURRENCY:USD  
TERMS:Net 30

CUSTOMER PO:34232  
ORDER NUMBER:1002613286  
ORDER DATE:08NOV16

B 10003951  
I DART AEROSPACE LTD  
L 1270 ABERDEEN STREET  
L HAWKESBURY ON K6A 1K7  
CANADA  
T  
O

S 10003951  
H DART AEROSPACE LTD  
I 1270 ABERDEEN STREET  
P HAWKESBURY ON K6A 1K7  
CANADA  
T  
O

S 1000  
H AVIALL CENTRAL WAREHOUSE  
I DALLAS CDC  
P 2750 REGENT BLVD  
DFW AIRPORT TX 75261  
USA  
F  
R  
O  
M

LINE	PO LINE	MFG	ITEM DESCRIPTION	ORDER QUANTITY	SHIP QUANTITY	QUANTITY BACK ORDER	UOM		CUSTOMER PRICE	EXTENDED CUSTOMER PRICE
00010	0	5N	PS890B2PT KIT, SEALANT, FUEL TANK, PT, PRC STD SPEC BATCH 7364337662 Exp Date: 01JUN17	12	12	0	EA		64.05	768.60

DAS  
26  
9-89

NOV 09 2016

**This is not an Invoice.**  
**For payment processing, please refer to Invoice.**

The recipient of these goods agrees to comply with all export regulations governing the transfer, sale, lease, or use of these goods.  
Diversion contrary to U.S. Law is prohibited.

#### CERTIFICATE OF CONFORMANCE

It is hereby certified that Aviall Services, Inc., is an approved distributor and meets all requirements of ISO9001, AS9100, AS9120 and AC 00-56 at 2750 Regent Blvd. DFW Airport, Texas. The products, articles or parts referenced on this document are in new or overhauled condition and were purchased from an approved source (FAA, EASA, TCCA, Mil Spec or Commercial). The Original Manufacturers' Certifications are maintained on file at our central office location, and copies are available upon request or at Aviall.com. For overhauled or repaired products, articles or parts, the original FAA 8130-3 / EASA Form 1 (Return to Service) or Yellow Tag, from the FAA/JAA/EASA approved Air Agency are attached to the component.

DISCOUNT TERMS APPLY ONLY TO SUB TOTAL. ALL  
RETURNED MERCHANDISE SUBJECT TO HANDLING  
FEE.  
THIS IS TO CERTIFY THAT AVIALL HAS COMPLIED WITH  
THE PROVISIONS OF THE FAIR LABOR ACT OF 1938  
AMENDED.



# BOX CONTENT LIST



ODO: 310005173849

ROUTE: FDXIPA

PAGE: 1 of 1  
DATE: 11/08/2016  
TIME: 20:17:26



Handling Unit: 110000000498608951

Packed at WorkCenter: SI09

CUSTOMER PO:34232  
ORDER NUMBER:8003783528

**B** CU10003951  
**I** DART AEROSPACE LTD  
**L** 1270 ABERDEEN STREET  
**L** HAWKESBURY ON K6A 1K7  
**T** CANADA  
**O**

**S** CU10003951  
**H** DART AEROSPACE LTD  
**I** 1270 ABERDEEN STREET  
**P** HAWKESBURY ON K6A 1K7  
**T** CANADA  
**O**

**S** 1000  
**H** AVIALL CENTRAL WAREHOUSE  
**I** DALLAS CDC  
**P** PO Box 619048  
**F** DFW AIRPORT TX 75261  
**R** USA  
**O**

LINE	PO LINE	MFG	ITEM DESCRIPTION	ORDER QUANTITY	SHIP QUANTITY	UOM
00010		5N	PS890B2PT=5N KIT: SEALANT,FUEL TANK,PT,PRC STD SPEC	12	12	EA
			BATCH 7364337662		12	
			Exp Date: 06/01/2017			

DAS  
26  
9.89

NOV 09 2016

**This is not an invoice.**  
**For payment processing, please refer to Invoice.**

The recipient of these goods agrees to comply with all export regulations governing the transfer, sale, lease or use of these goods.  
Diversion contrary to U.S. Law is prohibited.

#### CERTIFICATE OF CONFORMANCE

It is hereby certified that Aviall Services, Inc., is an approved distributor and meets all requirements of ISO9001, AS9100, AS9120 and AC 00-56 at 2750 Regent Blvd. DFW Airport, Texas. The products, articles or parts referenced on this document are in new or overhauled condition and were purchased from an approved source (FAA, EASA, TCCA, Mil Spec or Commercial). The Original Manufacturers' Certifications are maintained on file at our central office location, and copies are available upon request or at Aviall.com. For overhauled or repaired products, articles or parts, the original FAA 8130-3 / EASA Form 1 (Return to Service) or Yellow Tag, from the FAA/JAA/EASA approved Air Agency are attached to the component.

DISCOUNT TERMS APPLY ONLY TO SUB TOTAL. ALL  
RETURNED MERCHANDISE SUBJECT TO HANDLING  
FEE.  
THIS IS TO CERTIFY THAT AVIALL HAS COMPLIED WITH  
THE PROVISIONS OF THE FAIR LABOR ACT OF 1938  
AMENDED.



A BOEING COMPANY

AVIALL SERVICES INC  
2750 REGENT BLVD  
DFW AIRPORT TX 75261

# Commercial Invoice

Tracking Number	Government Transaction Number
703410313292	NOEEI FTR 30.36
Ship From	Delivery Number
LU_US_1000	8003783528
AVIALL CENTRAL WAREHOUSE 2750 REGENT BLVD. DFW AIRPORT TX 75261	Commercial Invoice Number *
	9304675466
	Ship Date
	08 November, 2016
	Incoterms
	EXW Shipping Point

Sold To	10003951	Ultimate Consignee	10003951	Ship To	10003951	Freight Forwarder	400010
DART AEROSPACE LTD 1270 ABERDEEN STREET HAWKESBURY ON K6A 1K7 CANADA		DART AEROSPACE LTD 1270 ABERDEEN STREET HAWKESBURY ON K6A 1K7 CANADA		DART AEROSPACE LTD 1270 ABERDEEN STREET HAWKESBURY ON K6A 1K7 CANADA		FEDEX FEDEX NATIONAL LTL INC PO BOX 94515 PALATINE IL 60094-4515	
						Tax Number: 20-4734803	

Comments:

Item	Part Number & Description	Country of Origin	Quantity	UOM	Unit Value USD	Extended Value USD
0000000	PS890B2PT - KIT: SEALANT,FUEL TANK,PT,PRC STD SPEC Export Tariff: 3214100020 Export Classification: EAR99 Authorization: NLRAT_NOV_2016 Sales Order: 1002613286 PO: 34232 Batch Number: 7364337662	US	12	EA	64.05	768.60

NOV 09 2016

DAS  
26  
9-89

Gross Value	768.60
Add on Charges	
Tax Value	
Freight Charges	
Total Net Value	768.60

FOR CUSTOMS PURPOSES ONLY  
NOT A BILLING INVOICE

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US laws is prohibited.

# SAFETY DATA SHEET



Date of issue/Date of revision 4 August 2016

Version 8

## Section 1. Identification

Product name : PS 890 B 2 Part A  
Product code : PS 890 B 2 Part A  
Other means of identification : Not available.  
Product type : Liquid.

### Relevant identified uses of the substance or mixture and uses advised against

Product use : Industrial applications.  
Use of the substance/ mixture : Sealants  
Uses advised against : Not applicable.

Manufacturer : PPG Aerospace PRC-DeSoto  
12780 San Fernando Road  
Sylmar, CA 91342  
Phone: 818 362 6711

Emergency telephone number : (412) 434-4515 (U.S.)  
(514) 645-1320 (Canada)  
01-800-00-21-400 (Mexico)

## Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).  
Classification of the substance or mixture : ACUTE TOXICITY (oral) - Category 4  
ACUTE TOXICITY (inhalation) - Category 4  
SKIN SENSITIZATION - Category 1  
CARCINOGENICITY - Category 2  
TOXIC TO REPRODUCTION (Fertility) - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (brain) - Category 2  
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 9.5%

### GHS label elements

Hazard pictograms :



**Section 2. Hazards identification****Signal word** : Warning

**Hazard statements** : Harmful if swallowed or if inhaled.  
May cause an allergic skin reaction.  
Suspected of damaging fertility.  
Suspected of causing cancer.  
May cause damage to organs through prolonged or repeated exposure. (brain)

**Precautionary statements**

**Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

**Response** : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention.

**Storage** : Store locked up.

**Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Supplemental label elements** : Sanding and grinding dusts may be harmful if inhaled. Avoid contact with skin and clothing. Wash thoroughly after handling. Emits toxic fumes when heated.

**Hazards not otherwise classified** : Oxidising potential : Contact with combustible material may cause fire. Keep away from clothing, incompatible materials and combustible materials. This material increases the risk of fire and may aid combustion. Prolonged or repeated contact may dry skin and cause irritation.

**Section 3. Composition/information on ingredients****Substance/mixture** : Mixture**Product name** : PS 890 B 2 Part A

Ingredient name	%	CAS number
manganese dioxide	≥20 - ≤50	1313-13-8
Zeolites	≥5.0 - ≤10	1318-02-1
Polyphenyls, quater- and higher, partially hydrogenated	≥5.0 - ≤10	68956-74-1
Talc, not containing asbestiform fibres	≥1.0 - ≤4.9	14807-96-6
carbon black, respirable powder	≥1.0 - ≤5.0	1333-86-4
terphenyl	≥1.0 - ≤5.0	26140-60-3
1,3-diphenylguanidine	≥0.10 - ≤2.2	102-06-7
bis(piperidinothiocarbonyl) tetrasulphide	≥1.0 - ≤5.0	120-54-7

SUB codes represent substances without registered CAS Numbers.

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

**Section 3. Composition/information on ingredients**

Occupational exposure limits, if available, are listed in Section 8.

**Section 4. First aid measures**

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a **POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN** immediately; have Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

**Description of necessary first aid measures**

- |                     |  |
|---------------------|--|
| <b>Eye contact</b>  | : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.  |
| <b>Inhalation</b>   | : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. |
| <b>Skin contact</b> | : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.   |
| <b>Ingestion</b>    | : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.  |

**Most important symptoms/effects, acute and delayed****Potential acute health effects**

- |                     |  |
|---------------------|--|
| <b>Eye contact</b>  | : No known significant effects or critical hazards.  |
| <b>Inhalation</b>   | : Harmful if inhaled.  |
| <b>Skin contact</b> | : Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction. |
| <b>Ingestion</b>    | : Harmful if swallowed.  |

**Over-exposure signs/symptoms**

- |                     |   |
|---------------------|---|
| <b>Eye contact</b>  | : No specific data.   |
| <b>Inhalation</b>   | : Adverse symptoms may include the following:<br>reduced fetal weight<br>increase in fetal deaths<br>skeletal malformations   |
| <b>Skin contact</b> | : Adverse symptoms may include the following:<br>irritation<br>redness<br>dryness<br>cracking<br>reduced fetal weight<br>increase in fetal deaths<br>skeletal malformations |
| <b>Ingestion</b>    | : Adverse symptoms may include the following:<br>reduced fetal weight<br>increase in fetal deaths<br>skeletal malformations   |

**Indication of immediate medical attention and special treatment needed, if necessary**

- |                           |   |
|---------------------------|---|
| <b>Notes to physician</b> | : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |
|---------------------------|---|



## Section 4. First aid measures

- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
sulfur oxides  
metal oxide/oxides

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

## **Section 6. Accidental release measures**

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### **Methods and materials for containment and cleaning up**

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## **Section 7. Handling and storage**

### **Precautions for safe handling**

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Special precautions** : Keep away from combustible materials. If this material is part of a multiple component system, read the Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Do not store below the following temperature: 5°C (41°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Manganese dioxide	<b>ACGIH TLV (United States, 3/2015).</b> TWA: 0.1 mg/m <sup>3</sup> , (as Mn) 8 hours. Form: Inhalable fraction TWA: 0.02 mg/m <sup>3</sup> , (as Mn) 8 hours. Form: Respirable fraction <b>OSHA PEL (United States, 2/2013).</b> CEIL: 5 mg/m <sup>3</sup> , (as Mn)
Zeolites	<b>ACGIH TLV (United States, 3/2015).</b> TWA: 1 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction None.
Polyphenyls, quater- and higher, partially hydrogenated Talc, not containing asbestiform fibres	<b>ACGIH TLV (United States, 3/2015).</b> TWA: 2 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction <b>OSHA PEL Z3 (United States, 2/2013).</b> TWA: 20 mppcf 8 hours. Form: not containing asbestos
carbon black, respirable powder	<b>ACGIH TLV (United States, 3/2015).</b> TWA: 3 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction <b>OSHA PEL (United States, 2/2013).</b> TWA: 3.5 mg/m <sup>3</sup> 8 hours.
terphenyl	<b>ACGIH TLV (United States, 3/2015).</b> C: 5 mg/m <sup>3</sup> C: 0.53 ppm <b>OSHA PEL (United States, 2/2013).</b> CEIL: 9 mg/m <sup>3</sup> CEIL: 1 ppm
1,3-diphenylguanidine	None.
bis(piperidinothiocarbonyl) tetrasulphide	None.

#### Key to abbreviations

A = Acceptable Maximum Peak  
 ACGIH = American Conference of Governmental Industrial Hygienists.  
 C = Ceiling Limit  
 F = Fume  
 IPEL = Internal Permissible Exposure Limit  
 OSHA = Occupational Safety and Health Administration.  
 R = Respirable  
 Z = OSHA 29 CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances

S = Potential skin absorption  
 SR = Respiratory sensitization  
 SS = Skin sensitization  
 STEL = Short term Exposure limit values  
 TD = Total dust  
 TLV = Threshold Limit Value  
 TWA = Time Weighted Average

#### Consult local authorities for acceptable exposure limits.

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

## **Section 8. Exposure controls/personal protection**

- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### **Individual protection measures**

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety glasses with side shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Gloves** : butyl rubber
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

## **Section 9. Physical and chemical properties**

### **Appearance**

- Physical state** : Liquid.
- Color** : Black.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : 360°C (680°F)
- Flash point** : Closed cup: Not applicable.

**Section 9. Physical and chemical properties**

<b>Material supports combustion.</b>	: Yes.
<b>Auto-ignition temperature</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>Flammability (solid, gas)</b>	: Not available.
<b>Lower and upper explosive (flammable) limits</b>	: Not available.
<b>Evaporation rate</b>	: Not available.
<b>Vapor pressure</b>	: Not available.
<b>Vapor density</b>	: Not available.
<b>Relative density</b>	: 1.88
<b>Density ( lbs / gal )</b>	: 15.69
<b>Solubility</b>	: Insoluble in the following materials: cold water.
<b>Partition coefficient: n-octanol/water</b>	: Not available.
<b>Viscosity</b>	: Kinematic (40°C (104°F)): >0.21 cm <sup>2</sup> /s (>21 cSt)
<b>VOC</b>	: 0
<b>% Solid. (w/w)</b>	: 100

**Section 10. Stability and reactivity**

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: When exposed to high temperatures may produce hazardous decomposition products. Refer to protective measures listed in sections 7 and 8.
<b>Incompatible materials</b>	: Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.
<b>Hazardous decomposition products</b>	: Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

**Section 11. Toxicological information****Information on toxicological effects****Acute toxicity**

Product/Ingredient name	Result	Species	Dose	Exposure
manganese dioxide	LD50 Oral	Rat	3478 mg/kg	-
Zeolites	LD50 Oral	Rat	>5 g/kg	-
carbon black, respirable powder	LD50 Dermal	Rabbit	>3 g/kg	-
terphenyl	LD50 Oral	Rat	>15400 mg/kg	-
1,3-diphenylguanidine	LD50 Oral	Rat	1400 mg/kg	-
	LD50 Oral	Rat	323 mg/kg	-

**Conclusion/Summary** : There are no data available on the mixture itself.

**Irritation/Corrosion****Conclusion/Summary**

**Skin** : There are no data available on the mixture itself.

**Eyes** : There are no data available on the mixture itself.

**Respiratory** : There are no data available on the mixture itself.

**Sensitization****Conclusion/Summary**

**Skin** : There are no data available on the mixture itself.

**Respiratory** : There are no data available on the mixture itself.

**Mutagenicity****Conclusion/Summary**

: There are no data available on the mixture itself.

**Carcinogenicity****Conclusion/Summary**

: There are no data available on the mixture itself.

**Classification**

Product/ingredient name	OSHA	IARC	NTP
Zeolites	-	3	-
carbon black, respirable powder	-	2B	-

**Carcinogen Classification code:**

IARC: 1, 2A, 2B, 3, 4

NTP: Known to be a human carcinogen; Reasonably anticipated to be a human carcinogen

OSHA: +

Not listed/not regulated: -

**Reproductive toxicity**

**Conclusion/Summary** : There are no data available on the mixture itself.

**Teratogenicity**

**Conclusion/Summary** : There are no data available on the mixture itself.

**Specific target organ toxicity (single exposure)**

**Section 11. Toxicological information**

Name	Category
Zeolites	Category 3
Talc, not containing asbestiform fibres	Category 3
1,3-diphenylguanidine	Category 3

**Specific target organ toxicity (repeated exposure)**

Name	Category
manganese dioxide	Category 2

**Target organs** : Contains material which causes damage to the following organs: lungs, skin, central nervous system (CNS).  
Contains material which may cause damage to the following organs: blood, kidneys, the nervous system, liver, spleen, lymphatic system, cardiovascular system, upper respiratory tract, bone marrow, eye, lens or cornea.

**Aspiration hazard**

Not available.

**Information on the likely routes of exposure****Potential acute health effects**

**Eye contact** : No known significant effects or critical hazards.  
**Inhalation** : Harmful if inhaled.  
**Skin contact** : Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.  
**Ingestion** : Harmful if swallowed.

**Over-exposure signs/symptoms**

**Eye contact** : No specific data.  
**Inhalation** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations  
**Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
dryness  
cracking  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations  
**Ingestion** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Conclusion/Summary** : There are no data available on the mixture itself. If splashed in the eyes, the liquid may cause irritation and reversible damage. Ingestion may cause nausea, diarrhea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

## Section 11. Toxicological information

### Short term exposure

**Potential immediate effects** : There are no data available on the mixture itself.

**Potential delayed effects** : There are no data available on the mixture itself.

### Long term exposure

**Potential immediate effects** : There are no data available on the mixture itself.

**Potential delayed effects** : There are no data available on the mixture itself.

### Potential chronic health effects

**General** : May cause damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : Suspected of damaging fertility.

### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value
Oral	1099.7 mg/kg
Inhalation (gases)	10532.1 ppm
Inhalation (vapors)	25.75 mg/l
Inhalation (dusts and mists)	3.511 mg/l

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
terphenyl	Acute EC50 0.022 mg/l Chronic NOEC 0.00322 mg/l	Daphnia Daphnia	48 hours 72 hours

### Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
terphenyl	-	-	Not readily

### Bioaccumulative potential



**Section 12. Ecological information**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
1,3-diphenylguanidine	1.69	19.95	low
bis(piperidinothiocarbonyl) tetrasulphide	2.8	16.88	low

**Mobility in soil**

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Section 13. Disposal considerations**

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to **Section 7: HANDLING AND STORAGE** and **Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION** for additional handling information and protection of employees. **Section 6. Accidental release measures**

**14. Transport information**

	DOT	IMDG	IATA
UN number	Not regulated.	UN3082	UN3082
UN proper shipping name	-	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1,3-diphenylguanidine)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1,3-diphenylguanidine)
Transport hazard class (es)	-		
Packing group	-		
Environmental hazards	No.	Yes.	Yes.
Marine pollutant substances	Not applicable.	(1,3-diphenylguanidine)	Not applicable.

**Additional information**

**DOT** : None identified.

**14. Transport information**

- IMDG** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.
- IATA** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

**Special precautions for user** : **Transport within user's premises**: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Section 15. Regulatory information****United States**

**United States inventory (TSCA 8b)** : All components are listed or exempted.

**SARA 302/304**

**SARA 304 RQ** : Not applicable.

**Composition/information on ingredients**

No products were found.

**SARA 311/312**

**Classification** : Immediate (acute) health hazard  
Delayed (chronic) health hazard

**Composition/information on ingredients**

Name	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
manganese dioxide	No.	No.	No.	Yes.	Yes.
Zeolites	No.	No.	No.	Yes.	No.
Polyphenyls, quater- and higher, partially hydrogenated	No.	No.	No.	Yes.	No.
Talc, not containing asbestiform fibres	No.	No.	No.	Yes.	No.
carbon black, respirable powder	Yes.	No.	No.	No.	Yes.
terphenyl	No.	No.	No.	Yes.	No.
1,3-diphenylguanidine	Yes.	No.	No.	Yes.	Yes.
bis(piperidinothiocarbonyl) tetrasulphide	Yes.	No.	No.	Yes.	No.

**SARA 313**

	<b>Chemical name</b>	<b>CAS number</b>	<b>Concentration</b>
<b>Supplier notification</b>	: manganese dioxide	1313-13-9	30 - 60

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

**California Prop. 65**

**WARNING:** This product contains a chemical known to the State of California to cause cancer.

**Section 16. Other information****Hazardous Material Information System (U.S.A.)**Health : **3** \* Flammability : **0** Physical hazards : **1**

(\*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-8888.

The customer is responsible for determining the PPE code for this material.

**National Fire Protection Association (U.S.A.)**Health : **3** Flammability : **0** Instability : **1**Date of previous issue : **4/24/2016**Organization that prepared : **EHS**  
the MSDS

Key to abbreviations : ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973  
as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
UN = United Nations

☑ Indicates information that has changed from previously issued version.

**Disclaimer**

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

# SAFETY DATA SHEET



Date of issue/Date of revision 2 July 2016

Version 6.01

## Section 1. Identification

Product name : PS 890 B 2 Part B  
Product code : PS 890 B 2 Part B  
Other means of identification : Not available.  
Product type : Solid.

### Relevant identified uses of the substance or mixture and uses advised against

Product use : Industrial applications.  
Use of the substance/ mixture : Sealants  
Uses advised against : Not applicable.

Manufacturer : PPG Aerospace PRC-DeSoto  
12780 San Fernando Road  
Sylmar, CA 91342  
Phone: 818 362 6711

Emergency telephone number : (412) 434-4515 (U.S.)  
(514) 645-1320 (Canada)  
01-800-00-21-400 (Mexico)

## Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : SKIN IRRITATION - Category 2  
CARCINOGENICITY - Category 2  
TOXIC TO REPRODUCTION (Unborn child) - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 8.5%

### GHS label elements

Hazard pictograms :



Signal word : Warning

**Section 2. Hazards identification**

**Hazard statements** : Causes skin irritation.  
Suspected of damaging the unborn child.  
Suspected of causing cancer.  
May cause damage to organs through prolonged or repeated exposure.

**Precautionary statements**

**Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection.  
Wear protective clothing. Do not breathe dust. Wash hands thoroughly after handling.

**Response** : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention.

**Storage** : Store locked up.

**Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Supplemental label elements** : **1-component mixtures:** formaldehyde is released during curing. Formaldehyde may cause irreversible effects, is irritating to the mucous membranes and may cause skin sensitization. Avoid contact with skin and clothing. Wash thoroughly after handling.  
Emits toxic fumes when heated.

**Hazards not otherwise classified** : Prolonged or repeated contact may dry skin and cause irritation.

**Section 3. Composition/information on ingredients**

**Substance/mixture** : Mixture

**Product name** : PS 890 B 2 Part B

Ingredient name	%	CAS number
Proprietary modified polysulfide polymer	≥5.0 - ≤8.4	Not available.
toluene	≥1.0 - ≤5.0	108-88-3
titanium dioxide	≥1.0 - ≤5.0	13463-67-7
proprietary modified polysulfide polymer	≤1.5	Not available.
Formaldehyde, oligomeric reaction products with phenol	<1.0	9003-35-4
thiram (ISO)	<1.0	137-26-8

SUB codes represent substances without registered CAS Numbers.

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

**Occupational exposure limits, if available, are listed in Section 8.**

## **Section 4. First aid measures**

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a **POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN** immediately; have Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

### **Description of necessary first aid measures**

- |                     |  |
|---------------------|--|
| <b>Eye contact</b>  | : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.  |
| <b>Inhalation</b>   | : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. |
| <b>Skin contact</b> | : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.   |
| <b>Ingestion</b>    | : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.  |

### **Most Important symptoms/effects, acute and delayed**

#### **Potential acute health effects**

- |                     |   |
|---------------------|---|
| <b>Eye contact</b>  | : No known significant effects or critical hazards. |
| <b>Inhalation</b>   | : No known significant effects or critical hazards. |
| <b>Skin contact</b> | : Causes skin irritation. Defatting to the skin.    |
| <b>Ingestion</b>    | : No known significant effects or critical hazards. |

#### **Over-exposure signs/symptoms**

- |                     |   |
|---------------------|---|
| <b>Eye contact</b>  | : Adverse symptoms may include the following:<br>pain or irritation<br>watering<br>redness  |
| <b>Inhalation</b>   | : Adverse symptoms may include the following:<br>reduced fetal weight<br>increase in fetal deaths<br>skeletal malformations   |
| <b>Skin contact</b> | : Adverse symptoms may include the following:<br>irritation<br>redness<br>dryness<br>cracking<br>reduced fetal weight<br>increase in fetal deaths<br>skeletal malformations |
| <b>Ingestion</b>    | : Adverse symptoms may include the following:<br>reduced fetal weight<br>increase in fetal deaths<br>skeletal malformations   |

### **Indication of immediate medical attention and special treatment needed, if necessary**

- |                            |   |
|----------------------------|---|
| <b>Notes to physician</b>  | : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| <b>Specific treatments</b> | : No specific treatment.  |

## Section 4. First aid measures

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
halogenated compounds  
metal oxide/oxides

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

## Section 6. Accidental release measures

- Small spill** : Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Special precautions** : If this material is part of a multiple component system, read the Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Do not store below the following temperature: 5°C (41°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits



**Section 8. Exposure controls/personal protection**

Ingredient name	Exposure limits
proprietary modified polysulfide polymer toluene	None. <b>OSHA PEL Z2 (United States, 2/2013).</b> AMP: 500 ppm 10 minutes. CELL: 300 ppm TWA: 200 ppm 8 hours. <b>ACGIH TLV (United States, 3/2015).</b> TWA: 20 ppm 8 hours.
titanium dioxide	<b>OSHA PEL (United States, 2/2013).</b> TWA: 15 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>ACGIH TLV (United States, 3/2015).</b> TWA: 10 mg/m <sup>3</sup> 8 hours.
proprietary modified polysulfide polymer Formaldehyde, oligomeric reaction products with phenol thiram (ISO)	None. None. <b>ACGIH TLV (United States, 3/2015). Skin sensitizer.</b> TWA: 0.05 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction and vapor <b>OSHA PEL (United States, 2/2013).</b> TWA: 5 mg/m <sup>3</sup> 8 hours.

**Key to abbreviations**

A = Acceptable Maximum Peak  
ACGIH = American Conference of Governmental Industrial Hygienists.  
C = Ceiling Limit  
F = Fume  
IPEL = Internal Permissible Exposure Limit  
OSHA = Occupational Safety and Health Administration.  
R = Respirable  
Z = OSHA 29 CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances

S = Potential skin absorption  
SR = Respiratory sensitization  
SS = Skin sensitization  
STEL = Short term Exposure limit values  
TD = Total dust  
TLV = Threshold Limit Value  
TWA = Time Weighted Average

**Consult local authorities for acceptable exposure limits.**

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures**

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Section 8. Exposure controls/personal protection**

- Eye/face protection** : Chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

**Section 9. Physical and chemical properties****Appearance**

- Physical state** : Solid.
- Color** : White.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: 67.22°C (153°F)
- Material supports combustion.** : Yes.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Lower: 1%
- Evaporation rate** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Relative density** : 1.5
- Density ( lbs / gal )** : 12.52
- Solubility** : Insoluble in the following materials: cold water.

Product code **PS 890 B 2 Part B**Date of issue **2 July 2018**Version **6.01**Product name **PS 890 B 2 Part B**

## Section 9. Physical and chemical properties

Partition coefficient: n-octanol/water : Not available.

Viscosity : Kinematic (40°C (104°F)): Not applicable.

VOC : 57 g/l

## Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : When exposed to high temperatures may produce hazardous decomposition products.  
Refer to protective measures listed in sections 7 and 8.Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions:  
oxidizing agents, strong alkalis, strong acids.

Hazardous decomposition products : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
toluene	LC50 Inhalation Vapor	Rat	49 g/m <sup>3</sup>	4 hours
	LC50 Inhalation Vapor	Rat	8000 ppm	4 hours
	LD50 Dermal	Rabbit	8.39 g/kg	-
	LD50 Oral	Rat	636 mg/kg	-
titanium dioxide	LD50 Oral	Rat	>11 g/kg	-
	LC50 Inhalation Dusts and mists	Rat	4420 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	560 mg/kg	-
thiram (ISO)				

Conclusion/Summary : There are no data available on the mixture itself.

#### Irritation/Corrosion

##### Conclusion/Summary

Skin : There are no data available on the mixture itself.

Eyes : There are no data available on the mixture itself.

Respiratory : There are no data available on the mixture itself.

#### Sensitization

##### Conclusion/Summary

Skin : There are no data available on the mixture itself.

**Section 11. Toxicological information**

**Respiratory** : There are no data available on the mixture itself.

**Mutagenicity**

**Conclusion/Summary** : There are no data available on the mixture itself.

**Carcinogenicity**

**Conclusion/Summary** : There are no data available on the mixture itself.

**Classification**

Product/Ingredient name	OSHA	IARC	NTP
toluene	-	3	-
titanium dioxide	-	2B	-
thiram (ISO)	-	3	-

**Carcinogen Classification code:**

IARC: 1, 2A, 2B, 3, 4

NTP: Known to be a human carcinogen; Reasonably anticipated to be a human carcinogen

OSHA: +

Not listed/not regulated: -

**Reproductive toxicity**

**Conclusion/Summary** : There are no data available on the mixture itself.

**Teratogenicity**

**Conclusion/Summary** : There are no data available on the mixture itself.

**Specific target organ toxicity (single exposure)**

Name	Category
proprietary modified polysulfide polymer	Category 3
toluene	Category 3
proprietary modified polysulfide polymer	Category 3

**Specific target organ toxicity (repeated exposure)**

Name	Category
toluene	Category 2
thiram (ISO)	Category 2

**Target organs** : Contains material which causes damage to the following organs: brain, central nervous system (CNS).  
Contains material which may cause damage to the following organs: blood, kidneys, the reproductive system, liver, heart, upper respiratory tract, skin, eye, lens or cornea.

**Aspiration hazard**

Name	Result
toluene	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure****Potential acute health effects**

**Eye contact** : No known significant effects or critical hazards.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : Causes skin irritation. Defatting to the skin.  
**Ingestion** : No known significant effects or critical hazards.

**Section 11. Toxicological information****Over-exposure signs/symptoms**

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
dryness  
cracking  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Delayed and immediate effects and also chronic effects from short and long term exposure**

- Conclusion/Summary** : There are no data available on the mixture itself. **1-component mixtures:** formaldehyde is released during curing. Formaldehyde may cause irreversible effects, is irritating to the mucous membranes and may cause skin sensitization. Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone. Ingestion may cause nausea, diarrhea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

**Short term exposure**

- Potential immediate effects** : There are no data available on the mixture itself.
- Potential delayed effects** : There are no data available on the mixture itself.

**Long term exposure**

- Potential immediate effects** : There are no data available on the mixture itself.
- Potential delayed effects** : There are no data available on the mixture itself.

**Potential chronic health effects**

- General** : May cause damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

**Section 11. Toxicological information**

- Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : Suspected of damaging the unborn child.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

**Numerical measures of toxicity****Acute toxicity estimates**

Route	ATE value
Oral	16598.2 mg/kg

**Section 12. Ecological information****Toxicity**

Product/ingredient name	Result	Species	Exposure
Titanium dioxide thiram (ISO)	Acute LC50 >100 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute EC50 0.04 mg/l Marine water	Algae - Nannochloropsis oculata	72 hours
	Acute LC50 0.02 mg/l Marine water	Crustaceans - Artemia franciscana - Nauplii	48 hours
	Acute LC50 0.01 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours

**Persistence and degradability**

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
toluene	-	-	Readily

**Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
toluene thiram (ISO)	2.73	8.32	low
	1.73	3.39	low

**Mobility in soil**

**Soil/water partition  
coefficient (K<sub>oc</sub>)** : Not available.

**Section 13. Disposal considerations**

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: **HANDLING AND STORAGE** and Section 8: **EXPOSURE CONTROLS/PERSONAL PROTECTION** for additional handling information and protection of employees. Section 6. Accidental release measures

**14. Transport information**

	<b>DOT</b>	<b>IMDG</b>	<b>IATA</b>
<b>UN number</b>	Not regulated.	Not regulated.	Not regulated.
<b>UN proper shipping name</b>	-	-	-
<b>Transport hazard class (es)</b>	-	-	-
<b>Packing group</b>	-	-	-
<b>Environmental hazards</b>	No.	No.	No.
<b>Marine pollutant substances</b>	Not applicable.	Not applicable.	Not applicable.
<b>Product RQ (lbs)</b>	4412.8	Not applicable.	Not applicable.
<b>RQ substances</b>	(thiram (ISO), toluene)	Not applicable.	Not applicable.

**Additional information**

**DOT** : Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

**IMDG** : None identified.

**IATA** : None identified.

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.